

Message Text

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ACTION AF-10

INFO OCT-01 EUR-12 ISO-00 FEA-01 ERDA-05 AID-05 CEA-01

CIAE-00 DODE-00 EB-08 FPC-01 H-01 INR-07 INT-05

L-03 NSAE-00 NSC-05 OMB-01 PM-05 USIA-06 OES-07

SP-02 SS-15 STR-05 TRSE-00 ACDA-12 OC-06 CCO-00

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R 091441Z DEC 77

FM AMEMBASSY LAGOS

TO SECSTATE WASHDC 5331

INFO USDOC WASHDC

AMEMBASSY ABIDJAN

AMEMBASSY BAMAKO

AMEMBASSY COTONOU

AMEMBASSY DAKAR

AMEMBASSY LONDON

AMEMBASSY NIAMEY

AMEMBASSY OUGADOUGOU

AMCONSUL IBADAN

RUTAKAXAMCONSUL KADUNA 4034

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ALSO FOR CORPS OF ENGINEERS, LTM COL. RYAN

E.O. 11652: N/A

TAGS: ENRG, EAGR, EQIP, EAID, BEXP, TGEN, NI

SUBJECT: MAJOR UNEXPECTED POWER SHORTAGE IN NIGERIA

REF: LAGOS A-91

SUMMARY. IN LAST MONTH ALL OF NIGERIA HAS EXPERIENCED SERIOUS AND UNFORESEEN POWER SHORTFALLS WHICH ARE EXPECTED TO CONTINUE FOR AT LEAST SIX MONTHS. ROUGHLY ONE QUARTER OF ELECTRIC POWER SUPPLY IS UNAVAILABLE DUE TO A LOW RATE OF FLOW ON NIGER RIVER, WHICH

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FEEDS COUNTRY'S MAJOR HYDROPOWER STATION AT ZAINJI. EMERGENCY MEASURES TO MEET CRISIS INCLUDE LOAD SHEDDING AND EMERGENCY PURCHASE OF GENERATORS BY NATIONAL ELECTRIC POWER AUTHORITY(NEPA). CRISIS WILL MEAN HIGHER SALES OF GENERATORS AND THERMAL EQUIPMENT, RETARDED ECONOMIC GROWTH AND ANOTHER THREAT TO POLITICAL STABILITY. END SUMMARY.

1. SINCE EARLY NOVEMBER THE STATE-OWNED MONOPOLY NEPA HAS RESORTED TO VOLUNTARY CUTS IN THE SUPPLY OF ELECTRIC POWER TO EACH OF THE MAJOR POWER CONSUMING CENTERS OF NIGERIA INCLUDING LAVOSN KUNO, IBADAN, ETC. SOME OF THESE CUTS HAVE BEEN SCHEDULED LOAD SHEDDING, OTHERS HAVE BEEN EMERGENCY SHUTDOWNS. THEY ARE NECESSARY TO PREVENT DAMAGING TRANSMISSION AND DISTRIBUTION EQUIPMENT US DEMAND SURGES BEYOND THE SUPPLY AVAILABLE. ANEXAMPLE IS LIGOS WHERE CONSUMERS ARE SCHEDULED TO GIVE UP 25 MEGAWATTS (MW) DURING THE DAY AND 50 MW AT NIGHT, BUT ON TWO RECENT DAYS EMERGENCY CUTBUCKS OF 125MW AND 100MW WERE NECESSARY. EMBASSY CURRENTLY RECEIVING POWER ONLY 50 PERCENT OF BUSINESS HOURS.

2. IN LENGTHY SESSIONS. EMBOFF INTERVIEWED NEPA'S TWO TOP POLICY OFFICIALS ASSISTANT GENERAL MANAGER (ENGINEERING) LAWRENCE AMU AND GENERAL MANAGER Y. A. DIKKOVN IN ATTEMPT TO DETERMINE REASONS AND POSSIBLE SOLUTIONS FOR PRESENT CRISIS. BOTH OFFICIALS WERE CANDID AND SOMEWHAT EMBARRASSED ABOUT PROBLEM IN WHICH THEY ARE UNCERTAIN OF THE CAUSE OR OUTCOME. THEY DID NOT APPEAR TO BE COVERING UP A COMPANY FAILURE SUCH AS A MISTAKEN EMPTYING OF THE KAINJI RESERV-VOIRE AS HAS BEEN SUGGESTED BY SOME OBSERVERS BUT WE DO NOT EXCLUDE THE POSSIBILITY THAT A MAJOR BLUNDER IS SOMEHOW INVOLVED.

3. ANU SAID THE ACTUAL LOSS IN PQOER SUPPLY IS UBOUT 200MW SINCE THE KAINJI DAM, RATED AT 560KW, IS ONLY BEING RUN AT ABOUT 350KW. IN A COUNTRY WHERE MAXIMUM DEMAND IS ABOUT 900KM THIS MEANS THE SUDDEN LOSS OF 22 PERCENT OF ITS AVAILABLE POWER.
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4. HE SAID THE IMMEDIATE CAUSE TF THE PROBLEM IS THAT THE NIGER RIVER FLOW IS WELL BELOW NORMAL FOR THE SEASON. NEPA NORMALLY USES THE HIGH FLOW TO REFILL DAMS DEPLETED DURING THE DRY SEASON. HE BROUGHT OUT DETAILED HYDROGRAPHIC CHARTS TO SHOW THAT THE FLOW LEVEP HAS BEEN LOWER EVERY YEAR SINCE 1974 AND THAT IN 1977 IT IS RUNNING BELOW THE FLOQ LEVEL ACHIEVED IN THE DROUGHT YEAR OF 1973. UNU SAID A LOW FLOW AT THIS TIME OF YEAR WOULD HUV E TO RESULT FROM SOME DISTURBANCE WITHIN THE NIGERIAN PORTION OF THE NIGER RIVER BASIN. ALL UAVAILABLE PHENOMENA HAD BEEN INVESTIGATED AND YET NO APPARENT CAUSE HAD BEEN DISCOVEREDM FOR EXAMPLE, RAIN FALL HAD BEEN NORMAL AND NEW DAMS ON TRIBUTARIESSUCH AS THE SOKOTO-PIMU WERE NOT SUFFICIENT TO ACCOUNT FOR THE DECLINE THAT HAS OCCUCRED. AMU FELT THAT THE FULL DIMENSIONS OF THE PROBLEM WOULD ONLY BECOMEAPPARENT IN THE NEXT FEW MONTHS. AT THAT TIME KAINJI DAM WILL BE AFFECTED BY THE CURRENT LOW RIVER CONDITIONS WHICH NOW EXIST HIGHER UP ON THE NIGER. OFFICIALS IN NIAMEY HAVE ESTIMATED THAT THE FLOW THERE IS NOW SO LOW AS ONLY TO BE ACHIEVED TWO TIMES IN ONE HUNDRED YEARS. EMBOFF ASKED AMU IF USG COULD HELP, PERHAPS BY BRINGING IN A TEAM OF SCIENTISTS UNDER REIMBURSABLE DEVELOPMENT PROGRAM (RDP), TO INVESTIVATE COURSES AND RECOMMEND SOLUTIONS. HE STATED THAT ONLY DIKKO COULD SPEAK TO THAT

ISSUE.

5. GENERAL MANAGER (GM) DIKKO STATED THAT HE COULD NOT IMAGINE

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C O R R E C T E D C O P Y (MRN 14279 VICE 04279)

WHAT AMERICAN EXPERTS COULD FIND AND THEREFORE HE PREFERRED TO
DISCUSS POSSIBLE SOLUTIONS TO THE PROBLEM. EMBOFF AND DIKKO
REVIEWED AT GREUT LENGTH POSSIBLE CAUSES INVESTIGATED BY NEPA.
DIKKO EVENTUALLY STATED HIS OPINION THAT IT BEST TO USSUME A LOW
RIVER WAS RESULT OF RAINS REPLENISHINV GROUND WATER TABLE
DIMINISHED BY 1973 DROUGHT. (HE LATER REPEATED THIS EXPLANATION
TO TWO AMERICAN BUSINESSMEN.) HE WANTED TO GET ON WITH PRACTICAL
MEASURES TO MINIMIZE THE DAMAGE CAUSED BY LOW RIVER FLOW.

6. AS A FIRST STEP TOWARD A SOLUTION DIKKO SAID KAINJI DAM IS
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NOW BEING RUN AT 2/3 OF NORMAL CAPACITY. IF THIS POLITICALLY UNPOPULAR MEASURE CAN BE MAINTAINED THROUGH FEXT MARCH THEY WILL BE ABLE TO BUILD THE RESERVOIR TO 5/7 ITS NORMAL LEVEL BY MARCH 1978, THE BEGINNING OF THE PERIOD WHEN THEY NORMALLY DRAW THE RESERVOIR DOWN. HE SAID THE NEXT STEP IS TO PURCHASE 100MW OF EMERGENCY GENERATING EQUIPMENT. THIS WOULD PROBABLY BE DIVIDED INTO FOUR 25 MW UNITS TO BE SITED AT IJORA POWER STATION IN LAGOS. A COMMERCIAL SOURCE HAS INFORMED US THAT THE ROUGHTLY DOLLARS 66 MILLION ORDER WILL BE SHARED BY GENERAL ELECTRIC AND BROWN-BOVERI (SWITZERLAND), BUT NO DECISION KNOWN TO DATE. UNITED TECHNOLOGIES, ROLLS ROYCE AND CURTIS-WRIGHT ALSO COMPETING FOR THIS ORDER. BOTH FIRMS PROMISED TO HAVE POWER ON STREAM WITHIN 90 DAYS OF ORDER PLACEMENT. PROBLEM FOR NEPA IS TO FIND SUPPLY OF AND STORAGE FOR 10,000 BARRELS A DAY OF GAS/OIL TO FIRE GENERATORS, IF DECISION TO PURCHASE IS TO BE APPROVED AT HIGHER LEVELS. IN THE LONGER RUN, DIKKO SAID NEPA WILL NEED TO RATE A GREATER SHARE OF ITS HYDROELECTRIC POWER AS A SECONDARY SOURCE AND THEREFORE WILL NEED TO PROVIDE MORE BASE LOAD THERMAL POWER THAN ORIGINALLY PLANNED (SEE REF AIR).

7. IMPLICATIONS:

- A. THE PRESENT CRISIS REFLECTS BADLY ON THE MANAGEMENT OF THE STATE-OWNED MONOPOLY NEPA AND THEIR PRINCIPAL CONSULTANTS MOTOR COLUMBUS (SWITZERLAND). NEPA WAS UNABLE TO PREDICT THE ONSET OF THE CRISIS AND STILL HAS NO FIRM EXPLANATION FOR ITS CAUSE. ALSO, ONE ASKS WHY THE CONSULTANTS AND MANAGEMENT PLACED SO MUCH OF NIGERIA'S ELECTRIC POWER SUPPLY INTO ONE BIG HYDROELECTRIC PROJECT IF THEY SUSPECTED, AS THEY SHOULD HAVE, THAT THE RIVER FLOW IS SO VARIABLE.
 - B. THE PROSPECT FOR A CORPS OF ENGINEERS PROGRAM IN NIGERIA MAY BE IMPROVED IN VIEW OF THE COUNTRY'S INABILITY TO FORESEE OR COPE WITH VARIATION OF THE FLOW OF THE COUNTRY'S MAKOR RIVER.
 - C. AS DIKKO POINTED OUT, CURRENT EMERGENCY MEASURES ARE
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POLITICALLY UNPOPULAR. ELECTRIC POWER BLACKOUTS STRIKE HOME TO THE ENTIRE POPULACE WITH THE SAME FORCE AS INFLATION IN FOOD PRICES OR WATER SHORTAGES, WHICH CONTINUE ALONG WITH OTHER INFRASTRUCTURE SHORTCOMINGS. FMG EMBARRASSMENT COULD LEAD TO REPLACEMENT OF THE HITHERTO POLITICALLY WELL-CONNECTED DIKKO. ONE POLITICALLY INFLUENTIAL MEMBER OF THE CONSTITUENT ASSEMBLY EVEN CALLED FOR THE CREATION OF RIVAL POWER COMPANIES TO FORCE THE NEPA MONOPOLY INTO BETTER SERVICE.

D. ECONOMICALLY, THE CRISIS SHOULD HAVE A SERIOUS EFFECT ON THE COUNTRY'S GROWTH RATE IN THE COMING YEAR. MANUFACTURING,

CONSTRUCTION AND DISTRIBUTION WHICH TOGETHER CONTRIBUTE
TWENTY-FIVE PERCENT OF GDP WILL ALL BE FORCED INTO PRODUCTION
CUTBACKS. FACTORIES RUNNING ON OWN EMERGENCY POWER USUALLY
UNABLE PRODUCE MORE THAN 50 PERCENT OF NORMAL. SINCE THE
COUNTRY MAY ALSO FACE A LAG IN OIL REVENUE THIS YEAR, THE
COMBINED EFFECT MIGHT BE TO PRODUCE A GROWTH RATE IN THE
NEIGHBORHOOD OF FIVE PERCENT INSTEAD OF THE FORECAST 8-9 PERCENT.
E. THE POWER SHORTAGE HAS SEVERAL COMMERCIAL IMPLICATIONS.
THE IMMEDIATE NEED FOR 100 MW OF GENERATORS IS PROBABLY ALREADY
SATISFIED, BUT THERE MAY BE MORE SUCH OPPORTUNITIES. THE POWER
CUTS SHOULD FURTHER HEAT UP THE DEMAND FOR EMERGENCY GENERATORS.
SALES OF BOTH COMMERCIAL AND PRIVATE GENERATORS ARE ALREADY
BOOMING WITH DISTRIBUTORS UNABLE TO FILL ORDERS FOR UP TO SIX
MONTHS. FINALLY THERE WILL BE MANY MAJOR OPPORTUNITIES AS

NEPA ATTEMPTS TO SHIFT ITS POWER SYSTEM PLANS AWAY FROM SUCH
AN EMPHASIS ON HYDROELECTRIC POWER. ENGINEERING, DESIGN,
CONSTRUCTION AND ELECTRIC POWER EQUIPMENT COMPANIES SHOULD
MAKE THEMSELVES KNOWN AT NEPA HEADQUARTERS NOW IN ORDER TO GROW
WITH THE NEW THERMAL PROJECTS THEY DEVELOP.
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